DESIGN PANEL NO. 9 - 2/27/97

CLCS CONSOLIDATED SDS THREAD - SHAWN QUINN

"TOPICS"

- Consolidated Systems Gateway Requirements.
- Consolidated Systems Gateway Performance Requirements
  - METRO will process all LC-39 Metro System data as it arrives.
  - METRO will store received Metro. System data in a FIFO for passing to the Augment SDS Process at an update rate of once per second.
  - METRO will calculate Surface Ice formation/melting rates at one minute intervals.
  - GMS will process all GMS/PMS data as it arrives.
  - GMS will store received GMS/PMS data in a FIFO for passing to the CCMS Measurement Extractor/RTCN Packet Builder CSC at a maximum update rate of twice per second.
  - The Gateway must be able to handle the total of the following packet rates or 150 total packets per second, whichever is greater.
    - The peak SDS packet rate (currently about 50 packets per second)
    - Twice the peak of the merge packets from the all the data providers
    - Twice the peak of the merge packets from six other data providers.
- Consolidated Systems Gateway Ground Rules
  - Network Services CSCI will be used to output all data packets.
  - There will be no filtering for changed data output on the RTCN.
  - When data is received containing packed discrete data, the data will be output on the RTCN individually, whether discrete data has changed or not.
  - For JUNO, a measurement's address on the RTCN will be the sum of the lengths of all FDs before it.
  - For JUNO, a table will be used to hold the measurement's health, status and 100usec tag. This table is initialized by the FD-RTCN ID file and can be modified by the console during run-time.
  - More than one FEP's data can be placed in an individual DDP queue based on the FEP-to-Q file.
  - FD-to-RTCN ID file is provided in ASCII.
  - FEP-to-Q file is provided in ASCII.
  - For JUNO, the user interface will be provided via a Telnet Session
  - For JUNO, only one RTCN Adapter Board will be installed.
  - The Consolidated Systems Gateway requires connectivity to the Shuttle Data Stream Prime (SDS). The SDS' is provided to the Consolidated Systems Gateway using the LON and SODN in conjunction.
- Consolidated Systems Gateway Architecture.
- Consolidated Systems Gateway HWCI.
- Consolidated Systems CSCI.
- Unit Test Plan.

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ARCHITECTURAL ISSUES RESOLVED

- The Consolidated Systems Gateway will provide no filtering for changed data on the RTCN. For discrete data samples, the measurements will be in a "packed" format. When 1 discrete data changes all eight bits of the "packed sample" will be sent. This may pose an issue for the processes running on the DDP & CCP with respect to responding to data that has not changed since a previous sample.

ACTIONS	ACTIONEE	DUE DATE	STATUS
No Action Required			